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L699 M210 M211 M212 M213 M214 M231 M232 M233 M272 M273 M280 M281 M282  
M311 M312 M313 M315 M316 M321 M322 M331 M332 M333 M342 M383 M391 M392  
M416 M620 M630 M781 M903 M904 Q273 Q616 R032; 8743-C9901-U; 8714-0  
1286-M

PA - (LIOY ) LION CORP

PN - JP62212498 A 19870918 DW198743 006pp

PR - JP19860054371 19860312

XA - C1987-129081

XIC - C11D-003/14 ; C11D-017/06

AB - J62212498 A granular detergent compsn is prep'd by coating powdery  
mixt. comprising detergent and 5-29 wt.% alkane sulphonate salt of  
formula (I) or (II) with water-insoluble micropowder having average  
particle size up to 10 microns and bulk density of 0.5-1.2 g/ccm

- In the formulae, R1=6-20C alkyl, R2=2-4C alkyl, acyl or 1-3C  
hydroxyalkyl, R3 and R4 are each independently 1-2C alkyl or 1-3C  
hydroalkyl, M=alkali metal, alkaline earth metal, ammonium or organic  
amine and n=integer of 2-3.

- The sulphonate salt (I) is pref prep'd. by reacting an alpha-olefin  
with SO<sub>3</sub> gas diluted by an inert gas to prepare 1,3-propane sultone  
and by reacting the sultone with an alcohol (e.g. methanol, ethanol or  
n- or isopropanol) or carboxylic acid (e.g. formic, acetic or  
propionic acid). The sulphonate salt (II) is pref. prep'd. by reacting  
1,3-propane-sultone or 1,4-butane-sultone with an amine (e.g.  
dimethyl-, diethyl-, monoethanol- or diethanol-amine). The detergent  
compsn pref contains other anionic detergent (e.g. linear alkylbenzene  
sulphonate salt, alpha-olefin sulphonate salt, alkyl sulphate salt or  
alkylether sulphate salt) or nonionic detergent (e.g. alcohol  
ethoxylate or alkylphenol ethoxylate), builder (e.g. zeolite or  
water-soluble builder), refouling inhibitor, reducing agent, enzyme,  
fluorescent due, Na<sub>2</sub>S0<sub>4</sub>.1OH<sub>2</sub>O and perfume. Pref. the detergent  
compsn is crushed and the crushed and screened granules are coated  
with water-insoluble micropowder (e.g. Ca- or Mg stearate, zeolite,  
SiO<sub>2</sub>, CaCO<sub>3</sub>, MgCO<sub>3</sub>, SiO<sub>2</sub> or TiO<sub>2</sub>) to provide coated granules having  
bulk density of 0.5-1.2.

- USE/ADVANTAGE - The alkane sulphonate salt improves the solubility and  
washing power of high bulk density granular detergent compsn.(0/0)

CN - 8743-C9901-U

DRL - 1286-M 8714-0

IW - HIGH BULK DENSITY GRANULE DETERGENT COMPOSITION PREPARATION COATING  
POWDER COMPRIZE DETERGENT ALKANE SULPHONATE SALT WATER INSOLUBLE MICRO  
POWDER

IKW - HIGH BULK DENSITY GRANULE DETERGENT COMPOSITION PREPARATION COATING  
POWDER COMPRIZE DETERGENT ALKANE SULPHONATE SALT WATER INSOLUBLE MICRO

POWDER  
NC - 001  
OPD - 1986-03-12  
ORD - 1987-09-18  
PAW - (LIOY ) LION CORP  
TI - High bulk density granular detergent compsn. - prep'd. by coating  
powder comprising detergent and alkane sulphonate salt with water  
insol. micro:powder